

## **REMARKS**

The Office Action has indicated that Claims 108-110 are directed to a separate invention from the subject matter recited in Claim 67 and has withdrawn the former claims from consideration. In addition, Claim 67 has been rejected under 35 U.S.C. §102(e) as defining subject matter, which is allegedly anticipated by the teachings in U.S. Patent No. 6,743,408 to Lieber et al. ("Lieber et al.")

The Office Action has imposed a Restriction Requirement, under 35 U.S.C. §121 (37 C.F.R. §1.142) with respect to Claims 67 and 108-110 as follows:

Group I, Claim 67 drawn to a solid substance, classified in Class 428, subclass 367; and

Group II, Claims 108-110, drawn to a substantially pure double wall nanotube, classified in Class 423, Subclass 447.2.

In support of the Restriction Requirement, the Office Action alleges that the inventions are related as combination and subcombinations. The Office Action has indicated that since Group I has been elected, the claims of Group II must be withdrawn.

Applicants reserve the right to file one or more divisional applications directed to the non-elected subject matter.

However, applicants hereby traverse the Examiner's requirement for restriction and request reconsideration in view of the following Remarks.

Applicants respectfully request that this Restriction Requirement be withdrawn since it is not in compliance with 35 U.S.C. §121 and 37 C.F.R. §§1.141-1.142. 35 U.S.C. §121 provides that the Commissioner may restrict an application when "two or more independent and

distinct inventions are claimed in a single application.” (Emphasis added). Similarly, 37 C.F.R. § 141(a) permits restriction conditioned upon a finding that independent and distinct inventions are found within one application. Only the statutory requirement that the various groups of claims are distinct has been proffered as the basis for the requirement of restriction. Even assuming, pro arguendo, that the Official Action was correct with respect to distinctiveness, there is absolutely no indication in the Official Action that Groups I and II are also independent.

In fact, applicant submits that Groups I and II are not independent.

MPEP §802.01 defines independent as follows:

The term “independent” (i.e., not dependent) means that there is no disclosed relationship between the two or more subjects disclosed, that is, they are unconnected in design, operation or effect.

Group I relates to a solid substance comprised by more than one half weight of hollow carbon nanotubes having walls consisting essentially of two layers of carbon atoms, i.e., DWNT’s, wherein said nanotubes consist of two concentric nearly cylindrical graphene layers, while Group II relates to a substantially pure double wall nanotube consisting of two layers of carbon atoms and consisting of two concentric nearly cylindrical graphene layers. In fact, the subject matter of Group II is entirely encompassed within Group I. Attention is directed to the enclosed Declaration of Dr. Moravsky, Paragraph 7, in which he testifies that the subject matter of substantially pure double walled nanotubes, whereby the double wall nanotube have two concentric nearly cylindrical graphene layers, as recited 108-110, are encompassed within the subject matter of Group I. Thus, the subject matter of Group II is clearly interrelated with and interdependent of the subject matter of Group I.

Thus, because these groups of claims are interdependent, and therefore not independent, the claims which the Office Action has grouped separately are not “independent

and distinct” so as to justify the Restriction Requirement. It is therefore respectfully submitted that the Restriction Requirement is improper and cannot be maintained.

Moreover, the United States Patent and Trademark Office (“USPTO”) has not established distinctiveness. According to MPEP §806.05 (c) an invention is distinct if it can be shown that the combination as claimed.

- (A) Does not require the particular of the subcombination, as claimed, for patentability, and
- (B) The subcombination can be shown to have utility either by itself or in another materially different combination.

It is to be noted that both parts have to be shown for distinctiveness.

However, the combination does require the particular of the subcombination for patentability. More specifically, both the subject matter of Groups I and II requires that the nanotubes be double layers of carbon whereby the double wall nanotube has two concentric nearly cylindrical graphene layers. Thus, even if the subject matter of Group II has utility by itself. This, in itself, is not sufficient to show distinctiveness, as alleged, as by the USPTO, as there is an “and” between (A) and (B). Thus, the subject matter of Groups I and II are not distinct as the USPTO has alleged.

The Office Action also seems to suggest that a prior art search requiring search in more than one classification is sufficient criteria for maintaining a restriction to allegedly different patentable inventions. This of course is in error.

Reliance on the classification of the groups of claims does not establish that the subject matter in the various group are independent and distinct. The classification system has

no statutory recognition as evidence of whether inventions are independent or distinct. The classification system is instead an aid in finding and searching for patents.

The classification system is also an unreliable basis for requiring restriction between claims to the various aspects of applicant's unitary invention, because the classification system exhibits considerable overlap in technical definitions. In particular, the definitions of subclasses in the classification system do not prevent an Examiner from basing patentability decisions, as to claims he assigned to one group, on patent references found in the subclass(es) with which he associated another group of claims.

Furthermore, the classification system is a poor basis for requiring restriction between related aspects of an invention because classifications and definitions change over time. Thus, a classification that might have seemed to support restriction at a given time could change, thereby casting a shadow over the propriety of the restriction requirement later on during the term of the patents issuing from parent and divisional applications. Indeed, classifications seem largely to change in response to considerations of administrative convenience, and often in response to nothing more than growth in the number of patents in a given class or subclass. These considerations have nothing to do with whether the subject matter of patents assigned to different classifications is "independent and distinct", as those terms are used in 35 U.S.C. §121, which fact proves that basing restriction requirements on the classification system is improper.

Moreover, it appears that the USPTO in rejecting the claimed subject matter does not itself believe that there is a patentable distinction between the subject matters of Groups I and II. It is to be noted that the only difference between Claims 67 and 108 is that the former subject matter requires the solid structure to be more than one half by weight of the hollow carbon nanotubes having walls consisting essentially of two layers of carbon atoms, said nanotubes

consisting of two concentric nearly cylindrical graphene layers. In other words, the major difference is in the amount present. In Claim 67, the amount is to be at least one-half by weight, while Claim 108 requires a substantially pure product. However, the Office Action alleges that this limitation “of more than one half by weight” be interpreted to be “anywhere up to 100 percentage by weight”, which by definition, encompasses substantially pure DWNTs, as recited in Claims 108-110. Thus, by its own admission, the subject matter of Groups I and II are not patentability distinct. Moreover, by its own admission, the USPTO has conducted a search to encompass the subject matter claims 108-110, since it has interpreted Claim 67 to include substantially pure. Thus, there is no additional burden on the USPTO to examine the subject matter of Claims 108-110 in the present application.

It is vital to all applicants that restriction requirements issue only with the proper statutory authorization, because patents issuing on divisional applications, which are filed to prosecute claims that the Examiner held to be independent and distinct, can be vulnerable to legal challenges alleging double patenting. The third sentence of 35 U.S.C. §121, which states that a patent issuing on a parent application “shall not be used as a reference” against a divisional application or a patent issued thereon, does not provide comfort to applicants against such allegations. The Court of Appeals for the Federal Circuit has declined to hold that 35 U.S.C. §121 protects a patentee from an allegation of same-invention double patenting, Studiengesellschaft Kohle mbH v. Northern Petrochemical Co., 784 F.2d 351, 355, 228 U.S.P.Q. 837, 840 (Fed. Cir. 1986); and in Gerber Garment Technology Inc. v. Lectra Systems Inc., 916 F.2d 683, 16 U.S.P.Q. 2d 1436 (Fed. Cir. 1990), that court held that §121 does not insulate a patentee from an allegation of “obviousness-type” double patenting, and in fact affirmed the invalidation on double patenting grounds of a patent that had issued from a divisional application

filed following a restriction requirement. Furthermore, it is far from clear that the step of filing a terminal disclaimer is available to resolve a double patenting issue that arises after the issuance of a patent on the divisional application.

All these considerations indicate that the imposition of a restriction requirement with inadequate authority can lead to situations in which an applicant's legitimate patent rights are exposed to uncertainty and even extinguished. Accordingly, to protect a patentee's rights and to serve the public's interest in the legitimacy of issued patents, applicants respectfully urge the Examiner not to require restriction in cases such as the present application wherein various aspects of a unitary invention are claimed.

In addition, the Courts have recognized the advantages to the public interest to permit patentees to claim all aspects of their invention, as the applicants have done herein, so as to encourage the patentees to make a more detailed disclosure of all aspects of their invention.

The CCPA has observed:

We believe that the constitutional purpose of the patent system is promoted by encouraging applicants to claim, and therefore to describe in the manner required by 35 U.S.C. §112 all aspects of what they regard as their invention, regardless of the number of statutory classes involved. (Emphasis added).

In re Kuehl, 456, F.2d 658, 666, 177 USPQ 250, (CCPA 1973).

Furthermore, applicants respectfully request that in view of increased Official Fees and the potential limitation of applicants' financial resources, a practice which arbitrarily imposes a Restriction Requirement may become prohibitive, and thereby contravenes the constitutional intent to promote and encourage the progress of science and the useful arts.

Hence, it is respectfully requested that the Examiner reconsider and withdraw the Restriction Requirement between claims 67 and 108-110, and provide an action on the merits with respect to all of the claims.

Pursuant to the rejection of Claim 67 under 35 U.S.C. §102(b), the Office Action cites Lieber et al.

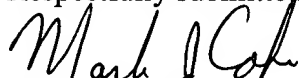
Lieber et al. was filed in the United States Patent and Trademark Office as USSN 09/966,812, on September 28, 2001. It claims benefit of provisional application of USSN 60/277,347 filed on September 29, 2000. Assuming that the provisional application has 35 U.S.C. §112 supports for the subject matter relating to DWNTs, the effective filing date of Lieber et al. is September 29, 2000.

The present application was filed on October 6, 2006, which is about one week after the earliest possible effective filing of date of Lieber et al. Applicants, however, are enclosing a 37 CFR §1.131 Declaration of Alexander Moravsky, in which the declarant testified that he conceived and reduced to practice the subject matter of Claim 67, which is directed to a solid substance comprised by more than one-half by weight of hollow carbon nanotubes having walls consisting essentially of two layers of carbon atoms, said nanotubes consisting of two concentric nearly cylindrical graphene layers, prior to September 29, 2000.

Thus, applicants have antedated Lieber et al. Withdrawal of the rejection under 35 U.S.C. §102(b) is respectfully requested.

Consequently, in view of the Remarks and the Declaration of Dr. Moravsky, it is respectfully requested that the above-identified application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark J. Cohen". The signature is written in a cursive, flowing style.

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